Application No.: 10/556,931

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A compound according to Formula (I)

$$(R^{1})_{p}$$

$$A^{2}$$

$$A^{1}$$

$$A^{2}$$

$$A^{2}$$

$$A^{3}$$

$$A^{4}$$

$$A^{2}$$

$$A^{4}$$

$$A^{2}$$

$$A^{2}$$

$$A^{4}$$

$$A^{2}$$

$$A^{2}$$

$$A^{2}$$

$$A^{4}$$

$$A^{2}$$

$$A^{2}$$

$$A^{2}$$

$$A^{2}$$

$$A^{2}$$

$$A^{3}$$

$$A^{4}$$

$$A^{4}$$

$$A^{5}$$

a pharmaceutically acceptable acid or base addition salt thereof, a stereochemically isomeric form thereof, an N-oxide form thereof or a quaternary ammonium salt thereof, wherein

-CH=CH-N=CH-
$$(a-3)$$
 or

-Z¹—Z²- is a bivalent radical of formula

$$(b-1),$$

$$(b-2),$$

$$-NR^{7}$$
-CH₂-CH₂-O (b-3);

wherein R⁷ is hydrogen, hydroxy, alkyl, alkyloxyalkyl or alkylcarbonyl;

each R¹, R², R³, R⁴ and R⁶ is independently hydrogen, halo, cyano, nitro, hydroxy,

p is an integer equal to 0, 1, 2 or 3;

R⁵ is hydrogen or alkyl;

Y is a bivalent radical of formula

$$-N - (CH2)_{\overline{n}} \qquad -N - (CH2)_{\overline{m}}$$
(c-1) (c-2)

wherein

m is an integer equal to 0 or 1;

n is an integer equal to 0, 1, 2, 3, 4, 5 or 6;

Page 2 of 11

Application No.: 10/556,931

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

the dotted line represents an optional double bond;

R⁸ is hydrogen; and

alkyl represents a straight or branched saturated hydrocarbon radical having from 1 to 6 carbon atoms or a cyclic saturated hydrocarbon radical having from 3 to 6 carbon atoms; said hydrocarbon radical being optionally substituted with at least one phenyl, halo, cyano, oxo, hydroxy, formyl or amino radical;

alkenyl represents a straight or branched unsaturated hydrocarbon radical having from

1 to 6 carbon atoms or a cyclic unsaturated hydrocarbon radical having from 3

to 6 carbon atoms; said <u>hydrocarbon</u>radical having at least one double bond
and said <u>hydrocarbon</u>radical being optionally substituted with at least one
phenyl, halo, cyano, oxo, hydroxy, formyl or amino radical;

aryl represents phenyl or naphthyl, optionally substituted with at least one radical that is alkyl, halo, cyano, oxo, hydroxy, alkyloxy or amino; and

heteroaryl is a monocyclic heterocycle heterocyclic radical that is azetidinyl, pyrrolidinyl, dioxolyl, imidazolidinyl, pyrrazolidinyl, piperidinyl, homopiperidinyl, dioxyl, morpholinyl, dithianyl, thiomorpholinyl, piperazinyl, imidazolidinyl, tetrahydrofuranyl, 2H pyrrolyl, pyrrolinyl, imidazolinyl, pyrrazolinyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, furanyl, thienyl, oxazolyl, isoxazolyl, thiadiazolyl, isothiazolyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl or triazinyl; each radical optionally substituted with at least one radical that is alkyl, aryl, arylalkyl, halo, cyano, oxo, hydroxy, alkyloxy or amino;

with the proviso that compounds wherein simultaneously $-a^1=a^2-a^3=a^4$ is (a-4), $-Z^1$ — Z^2 is (b-2) and Y is (c-2) are excluded.

- 2. (Canceled)
- 3. (Previously Presented) The compound according to claim 1, wherein R⁷ is hydrogen or methyl.
- 4. (Currently Amended) The compound according to claim 1, wherein Y is a bivalent radical of formula (c-1) wherein n = 3 and R^8 is hydrogen or of formula (c-2) wherein m = 0 or 1 and R^8 is hydrogen.

Application No.: 10/556,931

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

5. (Previously Presented) The compound according to claim 1, wherein X is CR⁶; R², R³, R⁴ and R⁶ are each independently hydrogen, halo, cyano, nitro or hydroxy; and R⁵ is hydrogen.

- 6. (Currently Amended) The compound according to claim 1, wherein R⁷ is hydrogen or methyl; Y is a bivalent radical of formula (c-1) wherein n = 3 and R⁸ is hydrogen or (c-2) wherein R⁸ is hydrogen; and R⁵ is hydrogen.
- 7. (Canceled)
- 8. (Previously Presented) A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent and, as active ingredient, a therapeutically effective amount of a compound according to claim 1.
- 9. (Withdrawn) A method for the prevention and/or treatment in a mammal of a disorder or disease responsive to the inhibition of dopamine D₂, D₃ and/or D₄-receptors, comprising administering to the mammal a therapeutically effective amount of a compound according to claim 1.
- 10. (Withdrawn) A method for the prevention and/or treatment in a mammal of a disorder or disease responsive to the inhibition of serotonin reuptake and antagonism of 5-HT_{1A} receptors, comprising administering to the mammal a therapeutically effective amount of a compound according to claim 1.
- 11. (Withdrawn) A method for the prevention and/or treatment in a mammal of a disorder or disease responsive to the combined effect of a dopamine D₂, D₃ and/or D₄ antagonist, a selective serotonin reuptake inhibitor (SSRI) and a 5-HT_{1A}-agonist, partial agonist or antagonist, comprising administering to the mammal a therapeutically effective amount of a compound according to claim 1.
- 12. (Withdrawn) A method for the prevention and/or treatment in a mammal of general anxiety disorder, panic disorder, obsessive compulsive disorder, depression, social phobia, eating disorders, psychosis or neurological disorders, comprising administering to the mammal a therapeutically effective amount of a compound according to claim 1.

Application No.: 10/556,931

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

- 13. (Withdrawn) A method for the prevention and/or treatment of schizophrenia in a mammal, comprising administering to the mammal a therapeutically effective amount of a compound according to claim 1.
- 14. (Withdrawn/Currently Amended) A process for the preparation of a compound according to Formula (I) comprising

--alkylating a compound-of Formula (III) with a compound of Formula (II), , in a reaction-inert solvent and optionally in the presence of a base;

$$(R^{1})_{p} \xrightarrow{a^{2}} Z^{1} \longrightarrow CH_{2}-W + H-Y \longrightarrow X$$
(II)
$$(III)$$
(III)

wherein W is a leaving group; or

--reductively aminating a compound-of Formula (IV) with a compound-of Formula (III) in a reaction-inert solvent and in the presence of a reducing agent; or

$$(R^{1})_{p}$$

$$A^{2}$$

$$A^{3}$$

$$A^{4}$$

$$Z^{2}$$

--reacting an acid chloride of Formula (V) with a compound-of Formula (III) in a reaction-inert solvent and in the presence of a suitable base, and reducing the amide in a reaction-inert solvent in the presence of a reducing agent;

$$(R^{1})_{p} \xrightarrow{a^{2}} A^{1} \xrightarrow{Z^{1}} C - C1 + H - Y \xrightarrow{R^{2}} R^{3}$$

$$(V) \qquad (III)$$

Page 5 of 11

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

-a¹=a²-a³=a⁴- is a bivalent radical of formula

-Z¹—Z²- is a bivalent radical of formula

$$-O-CH_2-O-$$
 (b-1),

$$-O-CH_2-CH_2-O-$$
 (b-2),

$$-NR^{7}$$
-CH₂-CH₂-O- (b-3),

wherein R⁷ is hydrogen, hydroxy, alkyl, alkyloxyalkyl or alkylcarbonyl;

X is CR⁶;

each R¹, R², R³, R⁴ and R⁶ is independently hydrogen, halo, cyano, nitro, or;

is an integer equal to 0, 1, 2 or 3;

 R^5 is hydrogen or alkyl;

Y is a bivalent radical of formula

$$-N - (CH_2)_{\overline{n}} \qquad N - (CH_2)_{\overline{m}}$$

$$(c-1) \qquad (c-2)$$

(c-1)

wherein

is an integer equal to 0 or 1; m

is an integer equal to 0, 1, 2, 3, 4, 5 or 6;

the dotted line represents an optional double bond;

 R^8 is hydrogen; and

alkyl represents a straight or branched saturated hydrocarbon radical having from 1 to 6 carbon atoms or a cyclic saturated hydrocarbon radical having from 3 to 6 carbon atoms; said hydrocarbon radical being optionally substituted with at least one-phenyl, halo, cyano, oxo, hydroxy, formyl or amino radical;

alkenyl represents a straight or branched unsaturated hydrocarbon radical having from 1 to 6 carbon atoms or a cyclic unsaturated hydrocarbon radical having from 3 to 6 carbon atoms; said hydrocarbon radical having at least one double bond and said hydrocarbon radical being optionally substituted with at least one phenyl, halo, cyano, oxo, hydroxy, formyl or amino radical;

Application No.: 10/556,931

Office Action Dated: June 18, 2008

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

represents phenyl or naphthyl, optionally substituted with at least one radical that is alkyl, halo, cyano, oxo, hydroxy, alkyloxy or amino; and heteroaryl is a monocyclic heterocycle heterocyclic radical that is azetidinyl, pyrrolidinyl, dioxolyl, imidazolidinyl, pyrrazolidinyl, piperidinyl, homopiperidinyl, dioxyl, morpholinyl, dithianyl, thiomorpholinyl, piperazinyl, imidazolidinyl, tetrahydrofuranyl, 2H-pyrrolyl, pyrrolinyl, imidazolinyl, pyrrazolinyl, pyrrolyl, imidazolyl, pyrazolyl, triazolyl, furanyl, thienyl, oxazolyl, isoxazolyl, thiazolyl, thiadiazolyl, isothiazolyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl or triazinyl; each radical optionally substituted with at least one radical that is alkyl, aryl, arylalkyl, halo, cyano, oxo, hydroxy, alkyloxy or amino.

- 15. (Withdrawn) The process of claim 14, further comprising converting the compound of Formula (I) into a therapeutically active, non-toxic acid addition salt by treatment with an acid.
- 16. (Withdrawn) The process of claim 15, further comprising converting the acid addition salt into a free base by treatment with alkali.
- 17. (Withdrawn) The process of claim 16, further comprising converting the compound of Formula (I) into a stereochemically isomeric form, a N-oxide, or a quaternary ammonium salt.
- 18. (Withdrawn) The process of claim 14, further comprising converting the compound of Formula (I) into a therapeutically active, non-toxic base addition salt by treatment with a base.
- 19. (Withdrawn) The process of claim 18, further comprising converting the base addition salt into a free acid by treatment with an acid.